CLAIMS

1. A method for implementing power control on a connection between two transceivers, the method comprising the steps of

receiving frame-structured signal sent from the first transceiver using the second transceiver,

decoding the received signal in a decoder of the second transceiver, the decoder providing an estimate concerning the reliability of the signal in the output thereof,

comparing the estimated reliability or the parameter modelling the reliability to a particular given threshold value,

adjusting the transmission power of the first transceiver in the second transceiver by signalling power control information to the first transceiver so that the estimated reliability is as close as possible to the given reliability, wherein the power control information is calculated on the basis of the estimated reliability.

2. A method for implementing power control on a connection between two transceivers, the method comprising the steps of

receiving frame-structured signal sent from the first transceiver using the second transceiver,

decoding the received signal in a decoder of the second transceiver, the decoder providing an estimate concerning the reliability of the signal in the output thereof,

comparing the estimated reliability or the parameter modelling the reliability to a particular given threshold value,

adjusting the transmission power of the first transceiver in the second transceiver by signalling power control information to the first transceiver so that the estimated reliability is as close as possible to the given reliability, wherein an estimate of at least one reliability measure distribution is generated using the reliability measures of several received frames, and the power control information is calculated on the basis of the estimated reliability.

3. A method as claimed in claim 1 or 2 wherein the given threshold value is adjusted in order to optimize signal quality in a steplike fashion so that the step size depends on the estimated reliability.

4. A method as claimed in claim 1 or 2, wherein the steplike power control commands are signalled to the first transceiver so that the step size depends on the estimated reliability.

5. A method as claimed in claim 1 or 2, wherein the desired transmission power is signalled in such a manner that the power depends on the estimated reliability.

6. A method as claimed in claim 1 or 2, wherein an estimate concerning the bit error rate of the signal is obtained from the decoder.

7. A method as claimed in claim 1 or 2, wherein an estimate concerning the bit error rate of the frame bits is obtained from the decoder.

8. A method as claimed in claim 1 or 2, wherein an estimate concerning the frame error rate of the signal is obtained from the decoder.

9. A method as claimed in claim 1 or 2, wherein signal credibility metric is obtained from the decoder.

10. A method as claimed in claim 3 or 4, wherein the step size depends on the estimated reliability and on the reliability requirement set on the connection.

11. A method as claimed in claim 3 or 4, wherein the step size is selected from a set of possible step sizes.

12. A method as claimed in claim 1, wherein the probability of the correct frames is estimated for the received signal on the basis of the output signal of the decoder and that the power control is controlled on the basis of the estimated probability.

13. A method as claimed in claim 1 or 2, wherein the soft decisions provided by the decoder are utilized when calculating the reliability.

14. A method as claimed in claim 1 or 2, wherein the values obtained in CRC calculation are used together with the reliability values in connection with the adjustment.

15. A method as claimed in claim 1 or 2, wherein the reliability estimates enable to search for a step size that optimizes the BER outage probability.

16. A method as claimed in claim 1 or 2, wherein the information to be sent in consecutive frames is at least partly similar.

17. A method as claimed in claim 16, wherein the combination of the reliability metrics of consecutive frames should be kept at a desired level.

18. A method as claimed in claim 2, wherein at least two reliability metric distributions are calculated, where different distributions correspond with different signal statistics at the input of the decoder.

19. A method as claimed in claim 2, wherein a non-parametric estimator is used for generating a reliability measure distribution.

20. A method as claimed in claim 2, wherein a parametric estimator is used for generating a reliability measure distribution.

21. A method as claimed in claim 1 or 2, wherein the reliability estimate depends on the a posteriori probabilities or likelihood values of the information bits obtained from the output of the decoder.

22. An arrangement for implementing power control on a connection between two transceivers, the arrangement comprising in the second transceiver

means for receiving frame-structured signal sent from the first transceiver,

means for decoding the received signal, the means being arranged to provide an estimate concerning the reliability of the signal in the output thereof,

means for comparing the estimated reliability or the parameter modelling the reliability to a particular given threshold value,

means for adjusting the transmission power of the first transceiver by forming and signalling power control information to the first transceiver so that the estimated reliability is as close as possible to the given reliability,

means for adjusting the given threshold value in order to optimize signal quality, and

means for calculating the power control information on the basis of the estimated reliability.

23. An arrangement for implementing power control on a connection between two transceivers, the arrangement comprising in the second transceiver

means for receiving frame-structured signal sent from the first transceiver,

means for decoding the received signal, the means being arranged to provide an estimate concerning the reliability of the signal in the output thereof,

means for comparing the estimated reliability or the parameter modelling the reliability to a particular given threshold value,

means for adjusting the transmission power of the first transceiver by forming and signalling power control information to the first transceiver so that the estimated reliability is as close as possible to the given reliability,

means for generating an estimate of at least one reliability measure distribution using the reliability measures of several received frames, and

means for calculating the power control information on the basis of the estimated reliability.

24. An arrangement as claimed in claim 22 or 23, wherein the means adjust the given threshold value in order to optimize in a steplike fashion so that the step size depends on the estimated reliability.

25. An arrangement as claimed in claim 22 or 23, wherein the means signal steplike power control commands to the first transceiver so that the step size depends on the estimated reliability.

26. An arrangement as claimed in claim 22 or 23, wherein the means signal the desired power control so that the power depends on the estimated reliability.

27. An arrangement as claimed in claim 22 or 23, wherein the output of the decoding means comprise an estimate concerning the bit error rate of the frame bits.

28. An arrangement as claimed in claim 22 or 23, wherein the output of the decoding means comprise an estimate concerning the bit error rate of the signal.

29. An arrangement as claimed in claim 22 or 23, wherein the output of the decoding means comprise an estimate concerning the frame error rate of the signal.

30. An arrangement as claimed in claim 22 or 23, wherein the output of the decoding means comprise signal credibility metric.

31. An arrangement as claimed in claim 24 or 25, wherein the means control the power control in such a manner that the step size depends on the estimated reliability and on the reliability requirement set on the connection.

32. An arrangement as claimed in claim 24 or 25, wherein the means select the step size from a set of possible step sizes.

33. An arrangement as claimed in claim 22 or 23, wherein the means utilize the soft decisions provided by the decoder for calculating the reliability.

34. An arrangement as claimed in claim 22 or 23, wherein the means utilize the values obtained in CRC calculation for calculating the reliability.

35. An arrangement as claimed in claim 22 or 23, wherein the means search for a step value that optimizes the BER outage probability using the reliability estimate.

36. An arrangement as claimed in claim 22 or 23, wherein the means receive frame-structured signal sent from the first transceiver where the information in the consecutive frames is at least partly similar.

37. An arrangement as claimed in claim 22 or 23, wherein the means control the power control in such a manner that the combination of the reliability metrics of consecutive frames should be kept at a desired level.

38. An arrangement as claimed in claim 23, wherein the means calculate at least two reliability metric distributions where different distributions correspond with different signal statistics at the input of the decoder.

39. An arrangement as claimed in claim 23, wherein the means use a non-parametric estimator for generating the reliability measure distribution.

40. An arrangement as claimed in claim 23, wherein the means use a parametric estimator for generating the reliability measure distribution.

41. An arrangement as claimed in claim 22 or 23, wherein the means calculate a reliability estimator in such a manner that it depends on the a posteriori probabilities or likelihood values of the information bits to be obtained from the output of the decoder.